

STRATEGIC ALLIANCES IN THE TELECOMMUNICATIONS INDUSTRY

- THE CASE OF KOREA TELECOM -

By

Hae-Chul LEE

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1	INTRODUCTION	1
1.1	Background and Purpose of the Study	1
1.2	Organization of the Study	1
Chapter 2	LITERATURE REVIEW ON STRATEGIC ALLIANCES	3
2.1	Concept of Strategic Alliances	3
2.2	Motivation of Strategic Alliances	6
2.3	Types of Strategic Alliances	9
Chapter 3	STRATEGIC ALLIANCES IN THE WORLD TELECOM INDUSTRY	12
3.1	Characteristics of Strategic Alliances in the Telecom Industry	12
3.2	The Impact of Deregulation and Structural Change	17
3.3	Future Direction of Strategic Alliances	28
Chapter 4	CASE STUDY OF STRATEGIC ALLIANCES IN KOREA'S	

TELECOM INDUSTRY	31
4.1 Overview of Korea's Telecom Industry	31
4.2 Case Analysis of Korea Telecom's(KT) Strategic Alliances	35
4.3 Recommendations for Korea Telecom	41
Chapter 5 CONCLUSIONS	49
APPENDIX	52
BIBLIOGRAPHY	60

LIST OF TABLES

[Table 2-1]	Motives and Objectives of Strategic Alliances by Industrial Development Stages	7
[Table 2-2]	Strategic Motives of Strategic Alliances	8
[Table 2-3]	Relative Importance of Strategic Objectives in Alliances	11
[Table 3-1]	Strategic Alliances between TOs	16
[Table 3-2]	Major Issues in the Korean Concession to the WTO Agreement on Basic Telecom Services	18
[Table 3-3]	Comparison of Concessions of Major Signatories	19
[Table 3-4]	Changes in the US Regulatory Environments and Pattern of AT&T's Alliances	21
[Table 3-5]	Changes in the UK Regulatory Environments and Pattern of BT's Alliances	23
[Table 3-6]	Changes in the Japanese Regulatory Environments and Pattern of NTT's Alliances	25
[Table 4-1]	Present Status of Facilities-Based Service Providers	32
[Table 4-2]	Number of Value-Added Service Providers Reported to MIC	32
[Table 4-3]	Prospect of Domestic Telecom Market	34
[Table 4-4]	Number of Strategic Alliances by Year	35
[Table 4-5]	Types of Strategic Alliances	36
[Table 4-6]	Motives of Strategic Alliances	37
[Table 4-7]	Relationship Structure of Alliances	38
[Table 4-8]	Number of KT's Alliances by Strategic Business	40

[Table 4-9] Strategy of Foreign TOs	42
[Table 4-10] Performance Targets of Korea Telecom	43
[Table 4-11] Comparative Analysis of KT's International Competitiveness	46

LIST OF FIGURES

[Figure 1-1] Overview of the Study	2
[Figure 2-1] Range of Interfirm Links	4
[Figure 2-2] Typology of Alliances	10
[Figure 3-1] Four Stages in the Restructuring of the Global Telecoms Market . . .	26
[Figure 3-2] Value Chain in the IT Industry	28
[Figure 3-3] Strategic Alliances between U.S. West and AT&T for the Provision of Integrated IT Services	30
[Figure 4-1] Growth Rate of Domestic Telecom Market and Share of GDP	33
[Figure 5-1] Desirable Direction of Strategic Alliances for KT	51

CHAPTER 1 INTRODUCTION

1.1 Background and Purpose of the Study

Market opening, following the launch of the World Trade Organization regime, poses difficult challenges to most corporations, because they cannot flexibly respond to the swiftly changing competitive environments simply by utilizing their own internal resources and capabilities. In this regard, most companies in the advanced countries, especially those engaged in high technology industries, have tried to strengthen their competitiveness by making collaborative relationships with other firms through strategic alliances.

The aim of this study is to examine the development of strategic alliances in the world telecommunications industry and to develop implications for Korea Telecom's(KT) strategic alliances.

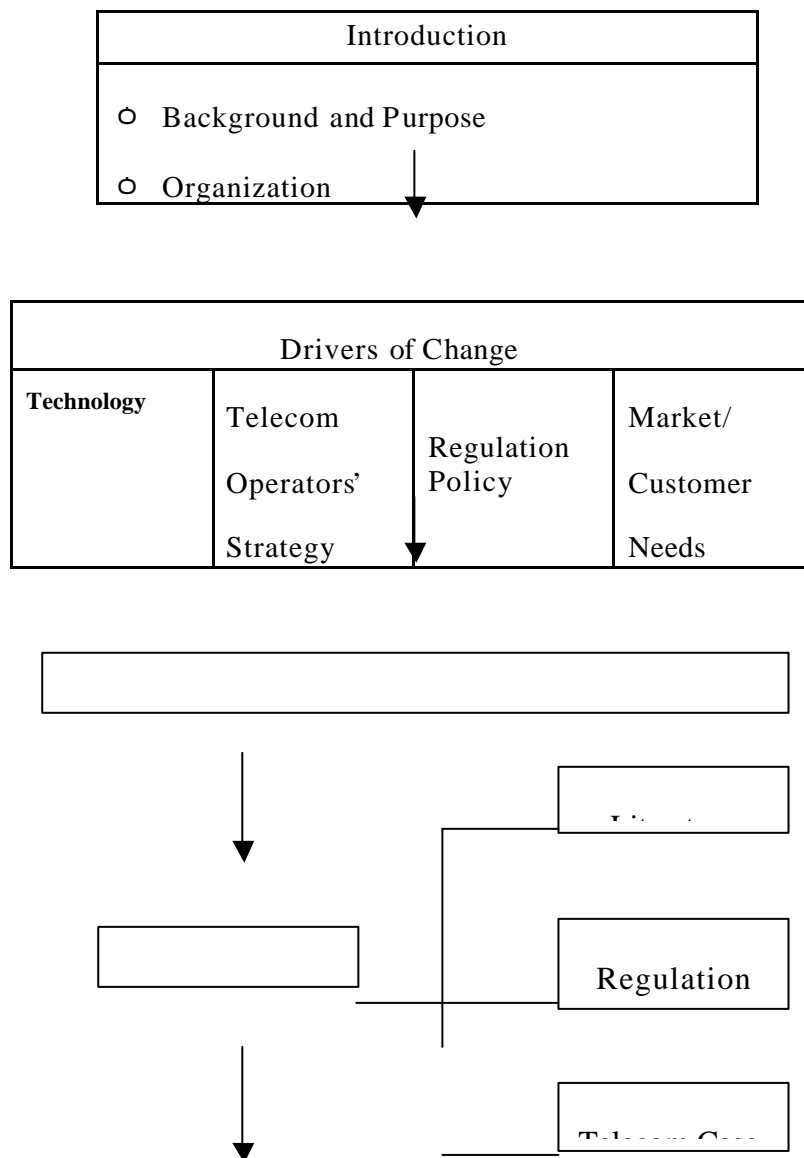
In this thesis, I would like to study the following major issues :

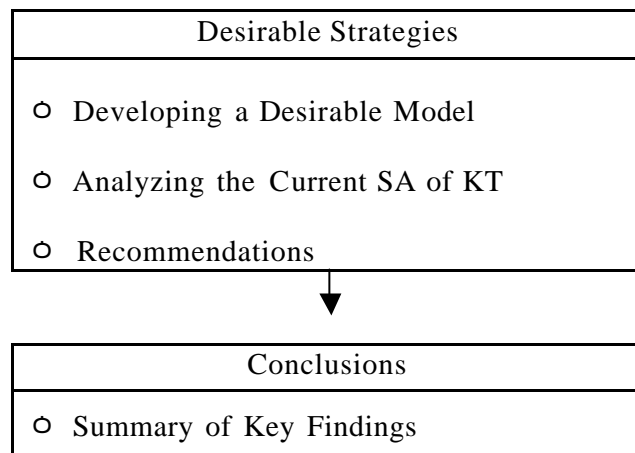
- Analyzing the realities of strategic alliances of global telecom operators related to the radical changes in the environment.
- Analyzing the current strategic alliances of Korea Telecom(KT)
- Recommending the desirable strategies for KT's strategic alliances.

1.2 Organization of the Study

The introductory chapter examines the rationale of strategic alliances in the context of the changing telecom environment. Chapter 2 discusses the concept, motives, and types of strategic alliances. Chapter 3 examines the characteristics of strategic alliances, the impact of deregulation and structural change, and future direction of strategic alliances. Chapter 4 focuses on the current strategic alliances of KT and recommend desirable direction for KT. Finally, Chapter 5 summarizes the key findings of the research.

[Figure 1.1] Overview of the Study





Chapter 2 LITERATURE REVIEW ON STRATEGIC ALLIANCES

2.1 Concept of Strategic Alliances

At its core, strategic alliance is a trading partnership that enhances the effectiveness of participating firms by providing mutually beneficial access of technologies, skills, or products. An alliance can take a variety of forms, ranging from an arm's-length contract to a joint venture. Because various interpretations of the term exist, we define a strategic alliance as possessing simultaneously the following three necessary and sufficient characteristics:¹⁾

- The two or more firms that unite to pursue a set of agreed upon goals remain independent subsequent to the formation of the alliance.
- The partner firms share the benefits of the alliance and control over the performance of assigned tasks.
- The partner firms contribute on a continuing basis in one or more key strategic areas, e.g., technology, products, and so forth.

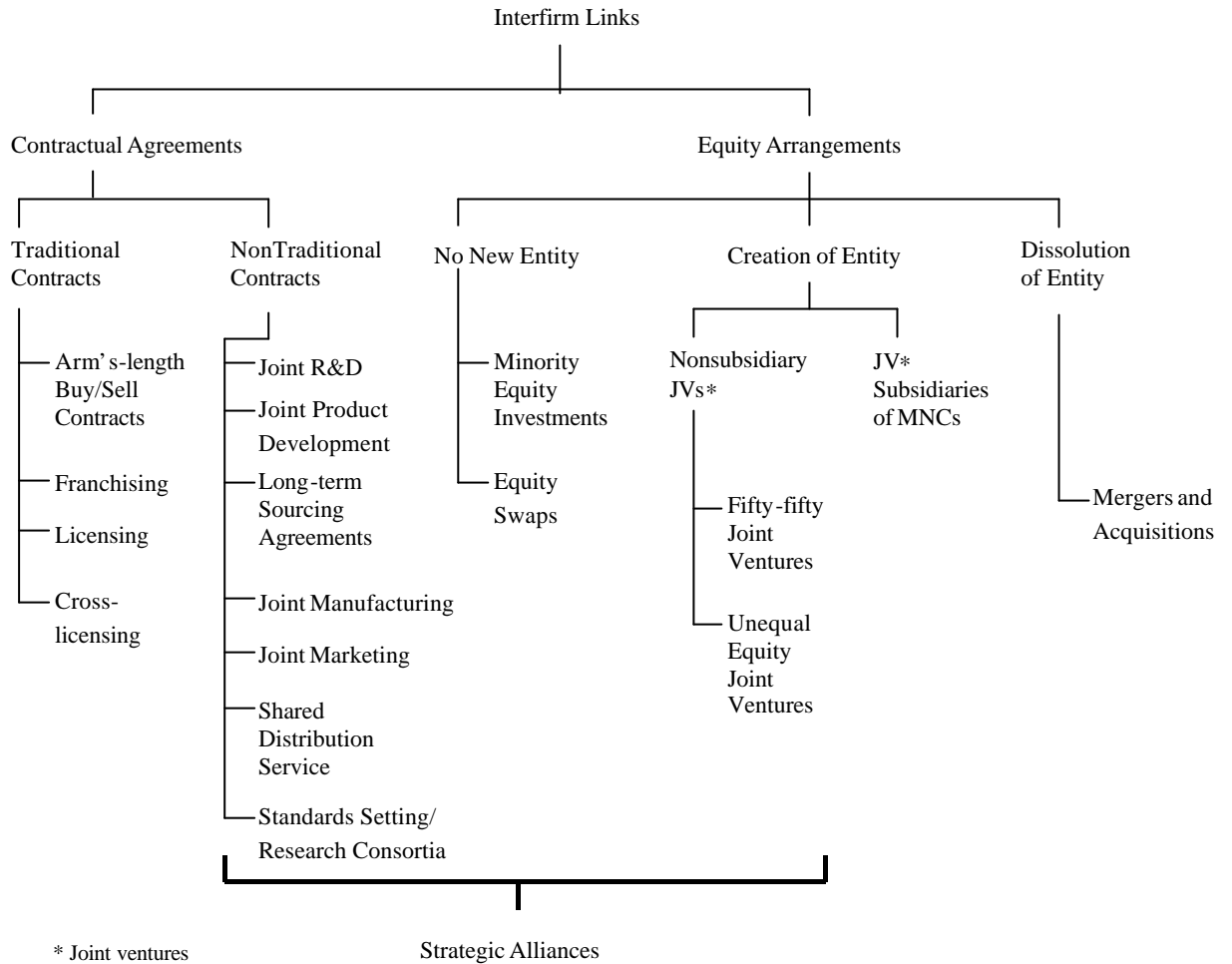
[Figure 2-1] Shows that strategic alliance is a complex interfirm relationship different from the traditional contractual agreements such as

¹⁾ M. Y. Yoshino and U.S. Rangan, "Strategic Alliances," *Harvard Business School Press*, 1995, 5-6.

arm's length buy/sell contracts, franchising, licensing, and cross-licensing, or the establishment of joint-venture companies.

As such, a strategic alliance is collaborative relationship of two or more companies created to accomplish mutually beneficial strategic goals and interests. Participating firms share the benefits of the alliance in proportion to their contribution. Strategic alliances is adopted widely by many corporations as a major vehicle for survival in the era of borderless competition. Especially in the IT industry, telecom operators(TOs) are trying to maintain their competitiveness and exploit new business opportunities by actively participating in M&A and strategic alliances.

[Figure 2.1] Range of Interfirm Links



Source : M. Y. Yoshino and U. S. Rangan, "Strategic Alliances," *Harvard Business School Press*, 1995, 8.

We need to mention a specific feature of strategic alliances. In an alliance, two or more companies may collaborate to compete with a third party, but may compete with each other in other sectors.

As compared with other contractual agreements or M&A, strategic alliances may provide more intimate relationships for the participants than contractual agreements, and render more flexible relationship than M&A. Among the various types of intercorporate collaboration, strategic alliance is located between contractual agreements and M&A. It differs from contractual agreement because the alliance needs more interfirm collaboration; licensing and franchising is not an alliance since it means just a one-time transfer of technologies and know-how. M&A is a unidirectional transaction implemented by a firm.

One of the reasons corporations pursue strategic alliance is that it is relatively cheaper to obtain the required technologies and resources than contractual agreements or acquisition. In the case of an acquisition, the buyer has to pay a large sum of money and engage in a series of difficult activities including the replacement of the management, but alliance does not need such processes and allows to utilize the existing technologies and resources while maintaining managerial independence. Also, strategic alliances do not require such huge amount of expenses required to monitor and control as mergers or licensing, and allows easy withdrawal from the business in case of unfavorable business results.

2.2 Motivation of Strategic Alliances

Strategic alliance is made to reduce or eliminate technological gaps between corporations through the development of new technologies, to improve qualities and enhance performance, and to continually expand/maintain market share in existing/new markets through the development/production of customized items. The recent increase of interfirm alliances can be explained by such factors as reduction of cost and time required in the development of new technologies and market entry, acquisition/sharing of information on new technologies and markets, sharing of complementary resources, dispersion of political and economical risks in unstable markets, and so forth.

According to Vyas, Shelburn & Rogers (1995)²⁾, strategic alliance occurs between two or more corporations located inside an industry, or different industries to expand distribution networks, induce synergy, reduce costs and expenses, disperse risks and secure raw materials through the introduction of new technologies.

Strategic alliance allows easy access to new technologies and resources, in such fields as technologies, manufacturing, banking and marketing, and also has an effect of preventing unnecessary competition beforehand. On the other hands, it appears that the motives of implementing strategic alliances are different by the industrial development stages, and the competitiveness of participants. Strategic alliances most actively occur in growth industries. On the other hand, strategic alliance has not been popular in mature industries because of their oligopolistic industrial structure which prevents easy access to existing markets. However, recent trend is that strategic alliance is becoming popular even in mature industries such as the telecommunications industry for the development of improved new products.

²⁾ Niren M. Vyas, William L. Shelburn and Dennis C. Rogers, "An Analysis of Strategic Alliances : Forms, Function and Framework," *Journal of Business and Industrial Marketing*, Vol.10, No.3, 1995.

Another theory on the strategic motives of strategic alliances was proposed by Lorange and Roos (1992). They divided the motives for strategic alliances into the following four categories : (1) defensive type, (2) maintenance type, (3) pursuing type and (4) restructuring type.

[Table 2-1] Motives and Objectives of Strategic Alliances by Industrial Development Stages

	Motives	Objectives
Mature industry	<ul style="list-style-type: none"> - Enter into foreign markets - Accelerate technological innovation - Improve productivity - Stem the market entry of new competitors - Disperse risks 	<ul style="list-style-type: none"> - Share excessive cost of market entry - Maintain existing technologies - Hold competitive position - Acquire technologies required for creating value added - Secure learning time
Growing industry	<ul style="list-style-type: none"> - Build footholds for competition - Acquire major managerial resources - Build core infrastructure - Legally introduce new products - Access to markets 	<ul style="list-style-type: none"> - Overcome functional restrictions - Improve management capability - Educate new consumers - Overcome unstable management environment - Secure monopolistic position

Source : Jung-Ho Pyo, "A Study on Strategic Alliances among IT Operators," 1996, 14.

As shown in [Table 2-2], the defensive type motive appears when a market leading firm tries to acquire new technologies through an alliance with small-sized firms specialized in specific fields, develop specific technologies, secure stable supply of raw materials, or exploit new business opportunities. The maintenance type appears when a firm is trying to maximize its competitive efficiency through strategic alliance as shown in some alliances in wireless cellular companies.

The pursuing type appears when a firm is trying to make an alliance to enhance its position in the market. The restructuring type occurs when a firm is trying to create value and build capabilities to facilitate business restructuring.

[Table 2-2] Strategic Motives of Strategic Alliances

		Position in Market	
		Leading Firm	Pursuing Firm
Importance of Business	Main Business	Defensive	Pursuing
	Secondary Business	Maintenance	Restructuring

Source : Peter Lorange and Johan Roos, “ Strategic Alliance : Formulation, Implementation and Evolution,” *Backwell*, 1992.

For firms located in the same industry, strategic alliance is carried out to expand markets or to customize products, while firms located in different industries use alliance to acquire new technologies or improve existing technologies. Recently, strategic alliances aimed at the enhancement of long-term competitiveness rather than short-term cost reduction are increasing in number.

Likewise interfirm strategic alliances are being widely adopted, especially in the IT industry, to improve productivity through the redesign of specialized job processes to break through the status quo in the main business through technological innovation, to develop secondary main businesses, and to build a global network through the securing of competitive strength in specific fields. However, there are also risks of emerging monopolistic or oligopolistic architecture in an industry through interfirm strategic alliances.

2.3 Types of Strategic Alliances

Strategic alliances can be classified in various ways on the basis of the period of collaboration, motives, contents and extent of alliances. Based on the period of collaboration, strategic alliances can be divided into two categories: one-time short-term collaboration and consecutive long-term collaboration. In general, the average collaboration period of an alliance in the 1990s is reduced to 4~5 years. In the cases of long-term alliances, companies participating in strategic alliances tend to prefer a series of short-term projects renewed or extended consecutively. However, if we count the number of interfirm collaborations rather than that of unit projects, firms which have experiences with interfirm collaborations more than once tends to prefer strategic alliances again.

Hergert & Morris (1988)³⁾ classified strategic alliances based on the extent of collaboration into the following types : restrictive collaboration in a couple of sectors and general collaboration. They found that firms tend to build cooperative relationship within a restrictive scope of business, but following the accumulation of experiences in interfirm cooperation, those firms tend to prefer all-out collaborations in general sectors. According to Hergert & Morris (1988), business collaborations most frequently occurred in such sectors as joint technological development, marketing and processing on commission, while the frequency of collaborations in general sectors such as development and manufacturing, or development and marketing was relatively low. This means that companies engaged in global business tends to selectively cooperate with each other to minimize troubles or burdens contingent to mutual collaboration.

On the other hand, Porter(1986)⁴⁾ categorized strategic alliances into X, Y, Z types of coalitions. Type X is coalitions across activities in which entities specialized in one or two sectors in a network supplement each other

³⁾ Hergert, M. and Morris, D., "Trends in International Collaborative Agreements. In Cooperative Strategies in International Business," *Lexington Books*, 1988.

⁴⁾ Michael E. Porter, "Competition in Global Industries," *Harvard Business School Press* , 1986, 336-338.

to develop, manufacture and supply a major product. Type Y is coalitions within activities in which companies cooperate with each other in a single sector, such as joint development of a technology. Type Z is a hybrid of type X and type Y.

Yoshino and Rangan (1995) suggested a typology of alliances based on conflict potential and extent of organizational interaction as shown in [Figure 2-2].

[Figure 2.2] Typology of Alliances

Conflict Potential	High	Precompetitive Alliances	Competitive Alliances
	Low	Procompetitive Alliances	Noncompetitive Alliances
		Low	High
		Extent of Organizational Interaction	

Source : M. Y. Yoshino and U. S. Rangan, "Strategic Alliances," *Harvard Business School Press* , 1995, 19.

Procompetitive alliances are generally interindustry, vertical value-chain relationships, such as between manufacturers and their suppliers or distributors. Once managed at arm's-length, they are now accorded much more attention as the strategic nature of these links is widely recognized. General Motors' link with Hitachi is representative of procompetitive alliances. In such links, although firms work closely to develop or improve products and processes, this type of cooperation requires low levels of organizational interaction. Moreover, the firms tend not to be rivals. Indeed, some firms, such as Toyota, rely on a federation of procompetitive alliances to compete against their market rivals, adding further dimensions to the arena of competition. The potential for conflict in such alliances is low.

Noncompetitive alliances tend to be intraindustry links among noncompeting firms. For example, General Motors and Isuzu, jointly develop a small car that both will sell. The level of interaction in this cooperative effort is high.

Competitive alliances are similar to noncompetitive alliances in terms of the joint activity (and hence in the level of organizational interaction) but differ in that the partners are apt to be direct competitors in the final product market. Examples include the ties between General Motors and Toyota, which are jointly manufacturing cars in Fremont, California.

Precompetitive alliances typically bring together firms from different, often unrelated industries to work on well-defined activities such as new technology development. DuPont and Sony's cooperative development of optical memory-storage products is an example.

[Table 2-3] shown the relative importance of strategic objectives by alliance type.

[Table 2-3] Relative Importance of Strategic Objectives in Alliances

Alliance Type	Strategic Objectives			Value Adding
	Flexibility	Core Protection	Learning	
Precompetitive	*****	***	**	*
Competitive	*	*****	***	**
Noncompetitive	**	*	*****	***
Procompetitive	***	**	*	*****

* Number of asterisks indicates relative importance in each alliance type.

Source : M.Y.Yoshino and U.S. Rangan, "Strategic Alliances," *Harvard Business School Press*, 1995, 22.

Chapter 3 STRATEGIC ALLIANCES IN THE WORLD TELECOM INDUSTRY

3.1 Characteristics of Strategic Alliances in the Telecom Industry

3.1.1 Strategic Alliances in the Telecom Industry

Following the conclusion of the WTO Agreement on Basic Telecommunications Services, the meaning of national borders has become insignificant and competition in the world telecom markets has intensified. In this context, telecom operators (TOs) of most nations have tried to create strategic alliances to secure existing markets or to enter into new markets. Traditionally, telecom markets have been managed by governments. However, recent trends of globalization of corporate management, advancement of telecom technologies and diversification of telecom demands have brought about a rapid increase of strategic alliances between TOs. Such trends have facilitated the transfer of market control functions of governments to large TOs. It is expected that the WTO agreement would accelerate the formation of strategic alliances between TOs, which would eventually create global telecom service groups with enormous market clout and operating seamless global telecom networks.

3.1.2 Motivation of Strategic Alliances

In general, strategic alliance has been made to expand existing markets, cope with competitors, overcome barriers to market entry, acquire complementary technologies, share resources and risks, and secure the flexibility of organizational structure. Among these, the following five motives might be most relevant to strategic alliances made by TOs.⁵⁾

⁵⁾ Jung-II Choi, "Present Status and Prospects of International Strategic Alliances between Telecom Operators," *Information and Communications Policy Vol.184*, 1997, 23-24.

The first thing to consider is the securing of market share, and holding off of competitors. The alliance cases under this category are the formation of 「Unisource」 by Telia in Sweden, PTT in Switzerland, KPN in Netherlands, and Telefonica in Spain to stem the expansion of British Telecom (BT) to the European market, and the establishment of a joint venture company between BT and AT&T to secure a global telecom network, the creation of 「Global One」 by Deutsche Telecom (DT), France Telecom (FT) and Sprint, and the formation of 「WorldPartners」 led by AT&T.

The second motive is for entering into new business areas or expanding existing service markets by acquiring new service elements or securing more efficient distribution channels from partner companies. An alliance between AT&T and McCaw Cellular or the alliance between AT&T and GTE for wireless data services, the alliance between AT&T and NTT for international telecommunications business, the joint venture between Sprint, Comcast, and Cox Cable, the PCS consortium formed between Bell Atlantic, Nynex, US West, and AirTouch would belong to this category.

The third motive is to take advantage of strategic alliances with TOs in other countries as opportunities for entering into telecommunications markets of those nations. Strictly speaking, global telecom service groups have been established based on this motive. For example, BT took the advantage of the establishment of a JV company with AT&T in entering the US telecom market, and AT&T grasped that opportunity to participate in the European telecom market.

The fourth motive is the pursuit of economic rationalization. The IT industry has inherent characteristics such as economy of scale, economy of scope and network externality. It means that the integrated management and provision of telecom network facilities including cable TV and broadcasting networks by a company would be much more efficient and economical than that where numerous service providers try to manage and provide telecom and broadcasting services through separate network facilities. In this case, an integrated TO would make another alliance with equipment vendors to use it as leverage in negotiating with other suppliers.

The fifth motive is the sharing of resources and risks. The construction of global telecom networks or participation in global telecom markets would require huge investment with considerable risks. Strategic alliance might distribute such risks and reduce burdens of participating firms through sharing of appropriate resources.

3.1.3 Factors Facilitating Strategic Alliances

The factors facilitating strategic alliances in the IT industry could be divided into two categories: external and internal.⁶⁾ Among the external factors, the first to be considered would be governmental policies on deregulation and market competition. An example of this was the strategic alliance fever in the US market which was ignited by the 1984 divestiture of AT&T. The AT&T divestiture has stimulated competitions in long-distance telephone services and equipment markets. Thanks to the competition, consumers could enjoy price reduction, a new breed of innovative products and much improved services.

The second factor is the inducement of market competition. The introduction of competition in basic telecom service markets started in the US, UK and Japan in the 1980s and expanded to Australia, New Zealand, and Canada in the 1990s. The European Union (EU) opened its telecom market in 1998. Most governments have tried to increase competition in the basic telecom service markets as well as to induce intra-market competition between regional telephone companies, cable TV companies, and long-distance telephone operators, while protecting consumers.

Rapid advancement of telecom technologies and inter-dependencies between new services and telecom network technologies facilitated the vertical or horizontal collaboration between TOs. Also traditional types of collaboration between TOs, such as joint venture or M&A are increasing continuously.

⁶⁾ Jung-Ho Pyo, "A Study on Strategic Alliances among Information and Telecommunications Operators," *Soon Chun Hyang University*, 1996, 40-44.

The third factor is the opening of telecom markets and globalization. In the IT industry which has large potential of globalization, the market opening under the WTO regime would inevitably bring about the globalization, and the globalization would directly induce the intensification of competition.

The fourth factor is the emergence of global satellite networks and information superhighway. Such global networks would induce the collaborations among TOs, and accordingly the number of strategic alliances would also increase.

The fifth factor is the integration of IT technologies. Rapid advancement of IT technologies resulted in the integration of once-independent technologies, and such trend reduces the life cycle of most products and services and increases the R&D costs and risks. The integration of technologies also renders the boundaries of existing industries ambiguous and makes intra-industry competition more fluid. The result is the facilitation of strategic alliances.

Internal factors facilitating strategic alliances are such variables which encourage strategic alliances within a TO. These include many factors such as the necessity of rapid introduction of new products, efficient market entry, need of forward/backward links (economy of scope), upgrading of R&D capabilities, increase of development and manufacturing cost, economy of scale, and so forth.

3.1.4 Types of Strategic Alliances in the IT Industry

Strategic alliances between TOs can be classified by geographic dimension (cross-border and domestic) and characteristics of alliances (network, technology and investment). The geographic dimension shows the type of markets, while the alliance characteristics dimension shows its position in terms of marketing competence, technological capacities and financing capabilities. By classifying strategic alliances into this framework, we can see a trend of shifting interests of TOs' to global telecom services, overseas investments and development of new revenue source.

[Table 3-1] Strategic Alliances between TOs

	Cross-Border	Domestic
Network	<ul style="list-style-type: none"> ○ Global Network Alliance - AT&T WorldPartners - BT/MCI Concert - FT/DT/Sprint Global One - Unisource - Cable & Wireless 	<ul style="list-style-type: none"> ○ Vertical Alliance (Market entry) - AT&T/McCaw Cellula - Sprint/TCI/Cox Cable/Comcast ○ Alliances to share the cost and risks - Bell Atlantic/NYNEX/USWest/Airtouch ○ Horizontal alliances - Alliances between RBOCs, Cable TV operators
Technology	<ul style="list-style-type: none"> ○ TOs and IT equipment Manufacturers - BT/Stratacom ○ Collaboration to develop new products - AT&T/Unitel ○ International collaboration of GMPCS - Iridium, Globalstar, ICO, Odyssey ○ TOs and Multimedia firms - FT/General Magic, AT&T/Lotus Corp 	
Investment	<ul style="list-style-type: none"> ○ Equity participation in privatiation of incumbant TOs ○ Entering into IT markets in advanced countries ○ Participation in the construction of telecom infrastructure or new telecom projects 	

Source : Korea Telecom, "Telecommunications Policies and Market Trends in Major Countries pursuant to Environmental Changes," 1998, 22.

3.2 The Impact of Deregulation and Structural Change

3.2.1 The Korean Concession in the WTO Agreement on Basic Telecommunications Services

As shown in [Table 3-2], the main issues in the final concession of the Korean government submitted to the WTO are the removal of entry barriers to the Korean telecom market and the mitigation of regulation on marketing. The government allowed foreign TOs access to the domestic telecom services markets and abolished regulations on service provision (restriction on facility installation and network access).

The government also agreed to provide *de facto* market access through autonomy in telecom rate setting, cost-based access charge, fair and non-discriminatory interconnection agreement between TOs and guarantee of transparency.

[Table 3-2] Major Issues in the Korean Concession to the WTO Agreement on Basic Telecom Services.

Item		Current	Final Concessions
Foreign ownership limit		Wired : prohibited, Wireless 33% Single person ownership: Wired : 10% Wireless : 33% KT: 1%	- Allow 33% in wired/wireless from 1998(KT: 20%) - Allow 49% in wired/wireless from (KT: 33%) - Single person ownership limit : ditto (KT: 3%)
Foreign major shareholders		Prohibited	- To be allowed in 1999(except KT)
Appointment of foreigners as representatives or officers of local firms		Representative : Prohibited Officer: less than a third of total officers	- Allow the appointment of foreigners as representatives in 1998 - Abolish the restriction on No officers
Resale	Access to PSTN Voic	Prohibited	- Allow from 1999 (foreigners' ownership limited to 49%) - Allow 100% foreigners' ownership from 2001
	Other resale	No limits	- 100 % allowed from 1998
No. of service providers		Prior notification by the Government Application at any time (1996)	- Possible through the restriction of radio spectrum allocation
Cross-border supply		Restriction is possible	- Allow under the commercial contractual agreements with domestic operators
Regulation rules		Apply domestic regulations	- Adopt regulation principles in the Reference Paper
One-way satellite broadcasting service: Satellite TC broadcasting such as DTH/DBS, digital satellite radio broadcast		Possible to restrict	- Excluding from the concession

Source: Sung-Baik Oh, "Long-Term Strategy of KT for the Transformation into Global Telecom Service Group," *KISDI*, 1997, 52.

3.2.2 Changes in the Regulatory Environment of Major Countries

Upon the conclusion of the WTO Agreement on Basic Telecommunications Services, it is expected that the signatories will implement deregulation in the IT industry. [Table 3-3] compares the concessions submitted by major signatories.

[Table 3-3] Comparison of Concessions of Major Signatories

WTO Concession	Foreign Ownership Limit	Foreign Major Shareholder	Restriction on Representative	Restriction on Voice Resale
USA	Wired: 100% Wireless: Indirect 100%, Direct 20%	No limit	No limit	No limit
Canada	Facility ownership: 46.7% (Direct: 20%)	No limit	Monopoly on international telephone service by Sept. 1998	No limit
UK	100%	No limit	No limit	No limit
Germany	100%	No limit	No limit	No limit
France	Wired : 100% Wireless: Indirect 100%, Direct 20%	No limit	No limit	No limit
Japan	100%	No limit	NTT / KDD: 20%	No limit
Singapore	Direct: 49% Indirect: 24.9%	No limit	Facility-based wired service: Monopoly of ST until Mar. 2000	No limit
Korea	Wired/wireless: 49%	No limit (Except KT)	KT: 33%	No limit

Source: Sung-Baik Oh, "Long-Term Strategy of KT for the Transformation into Global Telecom Service Group," *KISDI*, 1997, 54-57.

By the 1970s, most countries regarded the telecom industry as public utilities based on the concept of natural monopoly.

However, rapid technological innovations in the fields of fiber optics, satellites and wireless in the 1980s and innovation in the interworking of communications, broadcasting, and computer industries made the concept of natural monopoly obsolete. To meet the diversifying demands of multinational companies and maximize the efficiencies of service provision through economy of scale, incumbent TOs have tried to forge strategic alliances with each other, and merge or acquire other companies in the industry.

In the section, I will briefly examine the history of telecom markets and patterns of strategic alliances in the US, UK and Japan, which have led the deregulation in the telecom markets.⁷⁾

1) USA

After the 1984 AT&T divestiture, the US long-distance telecom market has been occupied by three large TOs. As deregulation on the long-distance market has been successfully implemented, most TOs have concentrated their efforts on business diversification and strategic alliance. It seems that the conceptual guideline of the US government on deregulation has been ‘deregulation means competition.’

This attitude is based on the belief that deregulation would facilitate market competition, which will lower the level of telecom rates and improve the quality of services. A good example was the revision of Telecom Act in February 1996.

The revised Telecom Act may be regarded as a national strategy of the US to build up competitive strength to meet the threat of global mega-TOs. This Act actually removed the business restrictions of AT&T, RBOCs, and cable TV companies.

[Table 3-4] summarizes the major changes in the US regulatory environment and the resulting pattern of alliances forged by AT&T

⁷⁾ Jung-Ho Pyo, “Dynamic Patterns of Strategic Alliances of Global Telecoms after the WTO Basic Telecommunications Agreements,” 1997, 16-19.

[Table 3-4] Changes in the US Regulatory Environment and Pattern of AT&T's Alliances

	Changes in Regulatory Environment	Pattern of AT&T's Alliances
'82	- The Modification of Final Judgement	○ No alliances before 1982
'84	- Divestiture of AT&T	○ 1982~1988 Promote alliances thanks to deregulation in spite of Anti-Trust laws
'85	- Approve differential tariff system (FCC) - Introduce interconnection rate system	- Restrict diversification of AT&T - Establish joint ventures or subsidiaries on equipment manufacturing (make alliance with Philips to develop and produce switching systems in 1984)
'86	- Computer III Decision of FCC, separation of enhanced service sector from AT&T and RBOCs, abolish restriction on subsidiaries	- Diversify into VAN and computer business Equity participation or joint venture(23.5% equity participation in Olivetti for the marketing of computers)
'89	- Introduce price caps to AT&T	
'91	- Introduce price caps to RBOCs (FCC) - Allow the provision of information services by RBOCs - Abolish price caps for business services of AT&T	○ 1989-1995 Implement strategic alliances and M&A following the deregulation - Promote joint venture, M&A in computers, telecom equipment manufacturing and VAN (Acquire Istel Group in the UK in 1989, Acquire messaging business of NCR and Western Union in 1991)
'92	- Allow video transmission services to LECs (FCC) - Announce National Information Infrastructure (NII) - Designate the second cellular operators	- Equity participation and alliances in telecom service sectors(Establish WorldPartners in 1993) - Entering into new service sectors (20% equity participation in Unitel in Canada in 1992, Merging with McCaw Cellular in 1994)
'94	- VP Gore, propose Global Information Infrastructure at the ITU meeting held in Bueno Aires - Approve commercial video/dial tone services - Approve alliances of BT/MCI, AT&T/McCaw Cellular	○ Announce separation of organizations to concentrate in telecom service sector in 1995 ○ Participate in diverse fields following the complete liberalization of telecom markets after 1996(1998 : Acquire Teleport to participate in local telephone service, Merging with TCI, the largest cable TV company in the US, alliance with BT for international telecom services, 1997: Announce negotiation with SBC for M&A)
'95	- Approve the Revised Telecom Act	
'96	- February 1996, enact the revised Telecom Act	○ December 1998: Acquire global telecom network of IBM ○ April 1999: Capital alliance with Japan Telecom ○ April 1999: Alliance with NTT

2) UK

The British government started the liberalization of telecom industry and introduced competition through the privatization of British Telecom in 1984 (51% equity shares were sold at that time and the remaining disposed by 1993).

By the early 1990s, the UK telecom market has maintained a duopolistic structure by BT and Mercury. In March 1991, the Department of Trade and Industry published a white paper 'Competition and Selection,' which abolished the duopoly policy in the telecom market. Accordingly, other players were allowed to participate in the telephone service market, and especially cable TV companies were allowed to get licenses on telephone services. With this policy, the UK adopted the technology-led competition for the first time in the telecom industry.

Telecom policies of the UK tends to put emphasis on international telephony rather than local telephony, and place more weight on the US markets than the European market. In this context, the UK government has focused on strengthening BT's competitiveness, which has been in an inferior position compared with AT&T, NTT, and DT.

[Table 3-5] summarizes the changes in regulatory environment in the UK and the resulting pattern of strategic alliances of BT.

[Table 3-5] Changes in the UK Regulatory Environment and the Pattern of BT's Alliances

	Changes in Regulatory Environment	Pattern of BT's Alliances
'84	- Privatization of BT, Licensing to Mercury	○ After the 1984 privatization, diversified international businesses through M&A, equity participation, JV establishment (acquire 10% equity of ITT Dialcom in 1986, acquire 25% equity of Belize Telecom in 1988)
'85	- Start competition between two cellular operators (Cellnet, Vodafone)	
'87	- Start Competition in long-distance market between BT and Mercury	○ After 1988, concentrated in the US markets
'88	- Allow simple resale of domestic private lines and two-way breakout - EU prepared guidelines on the opening of European market	- Acquire 80% equity of Metrocast, a paging company, in 1988 - Acquire Tymnet in 1989 (merged with BT in 1991), acquire 22% equity of McCaw Cellular (disposed to AT&T in 1992)
'91	- DTI announced white paper 'Competition and Selection' - Complete opening of the UK telecom market	- Acquire 43% equity shares of MCI (US\$ 4.3 billion) in 1993
'93	- The UK government sold out of BT's equity shares	○ After 1991, concentrated in strategic alliance for the provision of global services
'94	- Provided licenses of public service provision to Sprint and AT&T	- 1991 : establish Suncordia - 1994 : establish Concert (BT 75%, MCI 25%) - 1996/1997 : make alliances with many Tos for nternational data services (ITJ, DACOM, Telefonica)
'95	- OFTEL announced policies on effective competition structure	- 1998 : announce JV establishment with AT&T (expect synergy effects of combining technologies/infrastructure of AT&T and marketing forces of BT)
'96	- Abolished duopoly in facility-based international telephony - OFTEL introduced standard interconnection rates	- March 1998 : establish BT Communications Service (70%) along with Marubenco
'98	- Liberalization of voice telephony and telecom infrastructure business in the EU	- July 1998 : 33.3% equity participation in Banariang in Malaysia - Sept. 1998 : acquire 23.49% equity stakes of LG Telecom

3) Japan

In 1985, Japan introduced competition in the telecom market through the privatization of NTT. Accordingly, in 1987 three new common carriers (DDI, Japan Telecom, and Teleway Japan) participated in the long-distance market monopolized by NTT until then. In 1989, two new common carriers (IDC and ITJ) joined the international telephone service market.

The Japanese government decided to strengthen the international competitiveness of NTT to cope with the trend of globalization in the world IT markets. In June 1997, the Japanese government revised a series of communications-related laws including Telecommunications Business Act, NTT Act, and KDD Act.

These measures encouraged TOs to explore new businesses and facilitate strategic alliances and M&As between TOs.

[Table 3-6] summarizes the changes in the Japanese regulatory environment and the resulting pattern of NTT's alliances.

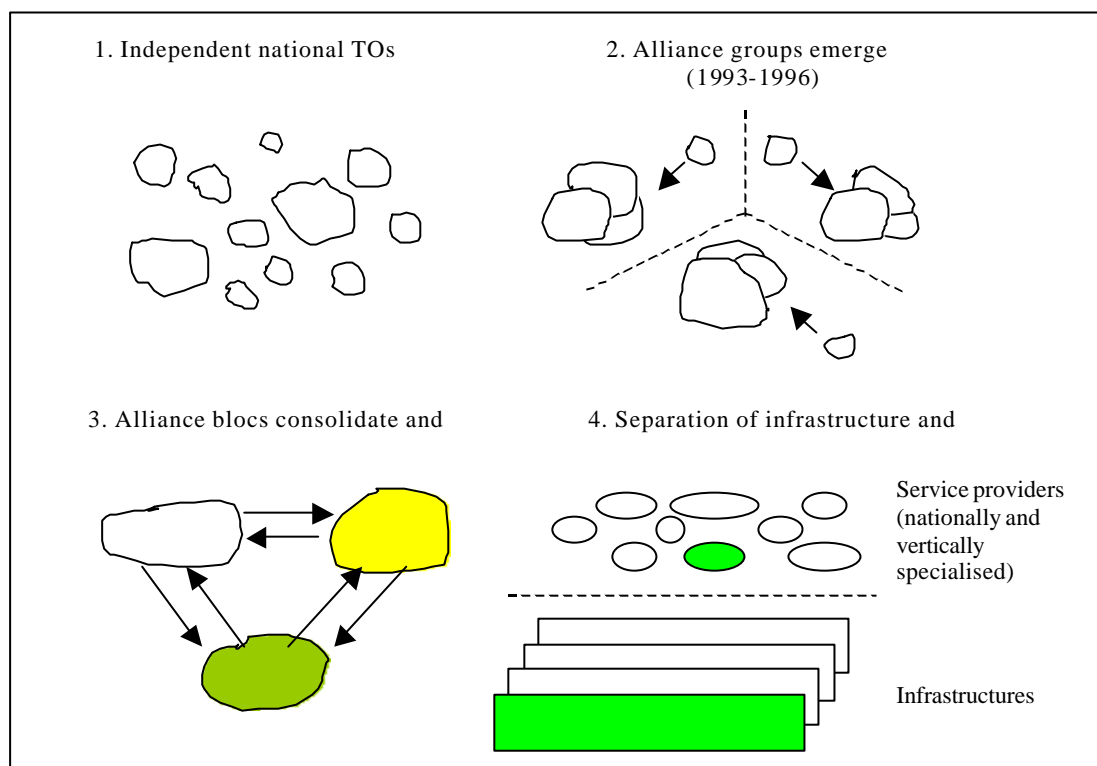
[Table 3-6] Changes in the Japanese Regulatory Environment and Pattern of NTT's Alliances

	Changes in Regulatory Environment	Pattern of NTT's Alliances
'85	- Privatization of NTT	○ 1985-1990 : privatization and introduction of competition
'87	- Introduce competition in the long-distance market (NTT and 3 NCCs)	- Diversify businesses through establishment of subsidiaries
'89	Start competition in the international telecom market (KDD and 2 NCCs) - Freeze the separation of NTT for 5 years	- Forge alliances around international consulting and engineering
'91	- Introduce business group system (long-distance, regional)	○ After 1991 : set corporate goal as global corporation/ leader in multimedia businesses
'92	- Introduce selective tariff system by NTT and NCCs - Establish a wireless mobile subsidiary	- Adopt diverse contractual agreements in multimedia sectors (joint development, joint marketing)
'94	- Announce Asia Information Infrastructure around Japan - NTT, apply same interconnection rate to NCCs	- In 1994, make alliance with General Magic, Silicon Graphics, MS for the joint development of multimedia software - In 1995, make alliance with PictureTel to develop N-ISDN-based video conferencing system
'95	- Start PHS service - Additionally designate 27 new operators in 7 sectors	○ Engage in telephone network construction project based on BOT(Built, Own and Transfer) scheme, technological cooperation
'96	- Interim announcement on deregulation of telecom industry - Liberalize tariff-setting of mobile cellular services - Decision on the separation of NTT	- In 1995, participate in Filipino telephone project along with Smart Communication
'97	- Revision of 3 telecom-related acts (dissolution of business divisions) - Announce full liberalization of tariff of long-distance and international telephony from 1998(introduce price cap system)	○ In 1997, make alliances to exploit newly open markets and overseas markets. ○ In April 1999, alliance with AT&T (establishment of international data network, operation and management)

3.2.3 Structural Changes in the Global Telecom Market

Analysys, a consulting firm, proposed a four-stage restructuring model as shown in [Figure 3-1].

[Figure 3-1] Four Stages in the Restructuring of the Global Telecoms Market



Source : Analysys, "Strategic Alliance," 1994, P.xi.

First, Stage 1 was the period of independent national TOs before 1993. In this stage, each country employed independent telecom policies based on the idea of telecom sovereignty and maintained state-run telecom monopoly under the concept of state-ownership of telecommunications. However, as globalization in other industries such as manufacturing had been in progress to no small extent, participants in such industries could not have been satisfied with the quality of international telecom services provided by such monopolies. Such dissatisfaction had acted as an opportunity for TOs to move into other telecom markets. Towards the end of this period, there had been growing demands for the globalization as the capacities of international

private networks had been continually growing, more and more corporate customers had begun to leave existing telecom markets, and increasing pressure for the opening of telecom markets. Thus, most TOs began to take into serious consideration strategic alliances with other TOs.

In Stage 2 which was from 1993 to 1996, alliance groups began to emerge. Although existing state-run TOs still remained strong, the conclusion of the WTO Basic Telecom Agreement accelerated the forging of global strategic alliances among TOs. Thanks to the opening of telecom markets, international competition began to spread into domestic markets, and the struggles to take away the market initiatives were getting fiercer. Each alliance tried to increase the number of partners to take advantage of economy of scale.

Stage 3 is from 1997 to 2001, During this period alliance blocs begin to consolidate and enter each others' domain. Continuous competition, cooperation, market ingression and merger and acquisition among TOs and others will readjust the global telecom markets and eventually a few alliance blocs will survive the competition and occupy oligopolistic positions. The integration of business activities such as marketing activities, quality control, etc., among partners of an alliance bloc will increase the influence of each alliance bloc to its partner TOs. Alliance blocs' efforts to trade foreign stakes will also be intensified during this period.

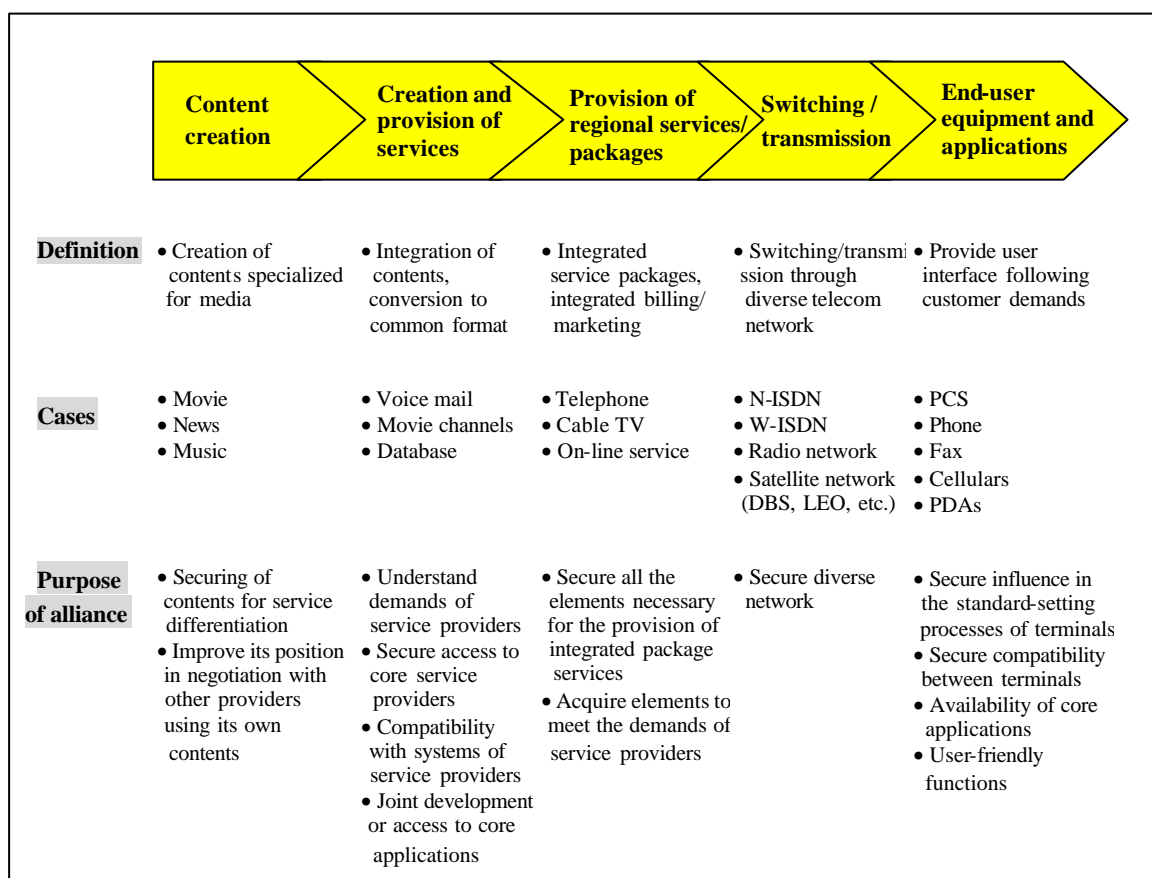
In Stage 4 which will start from 2002, TOs will separate infrastructure operations from their service provision businesses. In this period, domestic telecom network of each country will be integrated into a global telecom network which will be established on the basis of a single global standard. Service providers will position themselves as value-added service operations based on multimedia technologies such as video-on-demand, financial service network, etc., serving specific customer groups.

As shown in [Figure 3-1], the telecom industry has been on the move more or less according to this model. Whether the future reorganization of the telecom industry will follow this scenario is a matter of primary concern to us.

3.3 Future Direction of Strategic Alliances in the Telecom Industry

Recent trend of integrating industries and technologies sets off business alliances among TOs to provide integrated IT services which can meet the diverse demands of customers on communications, information gathering and entertainment. [Figure 3-2] shows a value chain in the IT industry. Customers want service providers who can offer various integrated services, and TOs try to branch out into new business sectors with high potentials. Such supply and demand acts as a motive for TOs to promote strategic alliances for the provision of integrated IT services.

[Figure 3-2] Value Chain in the IT Industry



Source : Korea Telecom, "Management and Technology," *January/February*, 1998, 52.

Thus, traditional TOs are actively pushing forward strategic alliances to integrated value chains in the IT industry. In other words, they concentrate on securing influences in contents creation businesses with high value-adding potential, and try to differentiate their services through the development of diverse packages of service and contents. They also speed up the network enhancement and the deployment of wideband network and actively engage in the development of user terminals and applications required for the provision of enhanced services such as multimedia services.

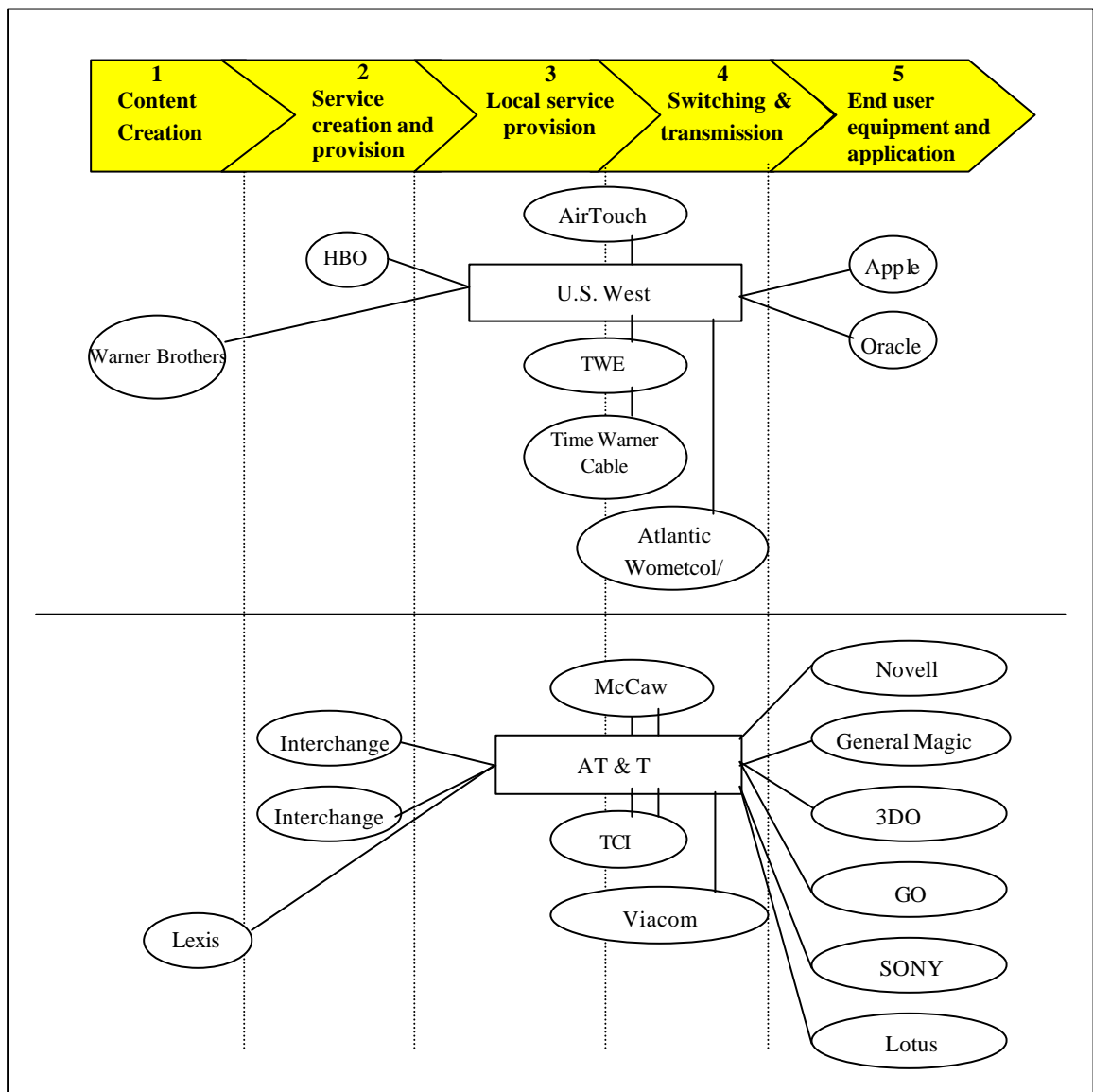
Generally, TOs are inclined to become an integrated IT service provider on the value chain of the IT industry. They try to establish an integrated system through which they can offer various entertainment services such as movies or music and information services which has been provided through computer on-line services, as well as traditional telecom services such as toll, cellular wireless and local telephone services.

[Figure 3-3] shows the case of strategic alliances between US West and AT&T. US West recognized the importance of contents and established TWE, a joint venture company with Time Warner. Through this JV company, US West built connection with content creation companies such as Warner Brothers and HBO, and at the same time made alliances with hardware and software companies such as Apple and Oracle to access the capabilities and resources required to develop and produce end-user terminals and applications for wide-band network services. AT&T has adopted a similar strategy. AT&T tries to secure influences on content creation business through the alliance of Interchange Imagination, an on-line service provider, and is concentrating in the development of Internet content business. AT&T is also participating in alliances for multimedia business to secure multimedia platform technologies.

To cope with the growth of demands on integrated services and grow into integrated telecom service providers, TOs should secure various capabilities and resources through the establishment of an integrated value chain which can control every processes from content creation to user platforms/applications, or from information generation to consumption. Considering the huge investment and expertise required for content creation,

it might be very risky and inefficient for a TO to directly participate in the content creation business. Outsourcing would be a more rational solution, though it would be necessary to secure its own contents to use it as a leverage in negotiations. It is also important for a TO to build a solid foundation on which it can create values for suppliers (contents, services, and equipment) and customers for the establishment of integrated value chain.

[Figure 3-3] Strategic Alliances between U.S. West and AT&T for the Provision of Integrated IT Services



Source : Korea Telecom, "Management and Technology," *January/February*, 1998, 53. service providers.

[Table 4-1] shows the present status of facilities-based service providers in Korea by category.

[Table 4-1] Present Status of Facilities-Based Service Providers

Services	Service Coverage	No. of TOs	Companies
Local	Nation-wide	2	Korea Telecom, HANARO Telecom
Long-distance	Nation-wide	3	Korea Telecom, DACOM, ONSE Telecom
International	Nation-wide	3	Korea Telecom, DACOM, ONSE Telecom
Mobile cellular	Nation-wide	2	SK Telecom, Shinsegi Telecom
PCS	Nation-wide	3	LG Telecom, KT Freetel, Hansol PCS
GMPCS	Nation-wide	1	SK Telecom
TRS	Nation-wide	2	Korea TRS, Anam Telecom
	Regional	9	Seoul TRS, Sebang Telecom, Taegu TRS, Kwanju TRS, Chungnam TRS, Saehan Telecom, Kangwon Telecom, Cheju TRS
CT-2	Nation-wide	1	Korea Telecom
Paging	Nation-wide	1	SK Telecom
		12	Naray Telecom, Seoul Telecom, Happy Telecom, Booil Tekecom, Sejung Telecom, Selim Telecom, Kwangju Telecom, Shinwon Telecom, Chunbuk Telecom, Saehan Telecom, Kwangwon Telecom, Cheju Telecom
Wireless Data	Nation-wide	3	Airmedia, Intec Telecom, Hanse Telecom
Facility lease	Nation-wide	6	Korea Telecom, DACOM, Thrunet, G&G Telecom, Dream Line, ONSE Telecom

Source : <http://webdb.mic.go.kr>, June 10, 1999.

As of April 1999, 154 companies are registered as special service providers with the MIC. Among those 30 companies are engaging in facility-based resale, 136 companies in simple resale, and 16 companies in PBX business. Recent trend of integrating information, telecommunications and broadcasting has broadened the areas of value-added services, and many governments have developed the value-added services strategically to enhance competitiveness. Domestically, the rapid spread of personal computers and computerization of business processes and the advancement of telecom and networking technologies make the future of this business very bright, and the number of companies participating in the value-added telecom business have increased steadily. [Table 4-2] shows the number of service providers who filed applications with MIC by year.

[Table 4-2] Number of Value-Added Service Providers Reported to MIC

Year	1993	1994	1995	1996	1997	1998.6.
Numbers of Companies	156	253	342	610	946	1,234

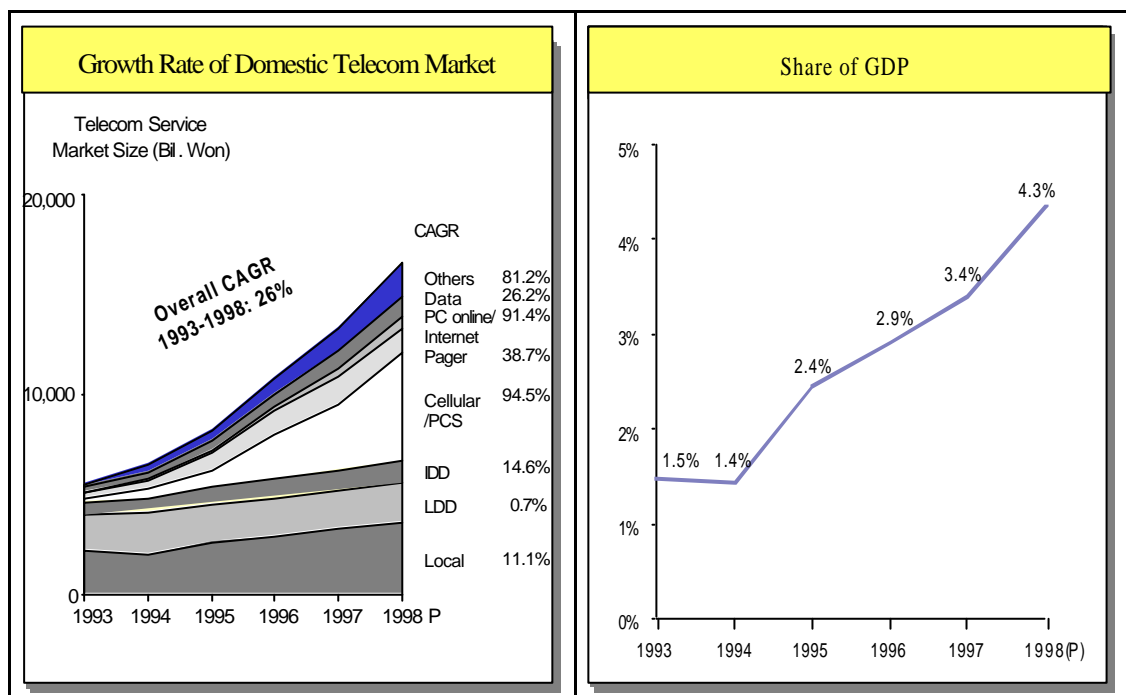
Source : MIC, "Annual Report on Telecommunications," 1998, 54.

4.1.2 Status and Prospects of the IT Service Market

1) Status of Domestic Telecom Market

As shown in [Figure 4-1], the Korean telecom market is fairly large compared with the Gross Domestic Product (GDP) of Korea, and is growing fast. This growth has not been deterred by the recent financial crisis. It is expected that the proportion of the telecom industry in Korea's GDP will be increasing continually.

[Figure 4-1] Growth Rate of Domestic Telecom Market and Share of GDP



Source : Korea Telecom, "KT's Business Strategy toward the 21st Century," 1999, 16.

Pursuant to the WTO Agreement on Basic Telecom Services, Korea has opened its telecom market. The Korean government opened voice resale service market in 1998, and recently liberalized the foreign ownership limit to 49% in the wireless/wired sector from the existing 33% to induce foreign investments (from July 1999) and allowed foreigners to become major shareholders in Korean firms. The government also abolished the single person ownership limit for the facilities-based service providers to secure international competitiveness of domestic telecom companies.

2) Prospect of Domestic IT Market

From the BA&H analysis in [Table 4-3], it is expected that the domestic wireless, data and Internet market will expand rapidly. The wireless market is

expected to maintain an annual average growth rate of 19% by 2002 thanks to continual growth of demands and rate reduction due to intensifying competition. The data and Internet markets will grow by more than 23% p.a., due to the explosive increase of contents, spread of E-commerce, and expansion of access capacities. Accordingly, the size of the domestic IT market will reach 25.7 trillion won by 2002, and by that time the appearance of an integrated telecom competitor is anticipated.

[Table 4-3] Prospect of Domestic Telecom Market

Domestic Telecom Market Size (unit : 100 million won)					
	1993	1997	2002E	CAGR ('97-' 02)	Difference in size ('97-' 02)
Wireless	2,150	41,070	97,610	19%	56,540
Local telephony	22,510	30,820	52,520	11%	21,700
Line to Mobile	-	-	30,730	19%	30,730
Long-distance telephony	21,590	17,630	21,370	4%	3,740
Data	4,290	9,160	30,450	27%	21,290
International telephony	9,770	13,720	8,120	-10%	(5,600)
ISP/OSP	270	2,840	7,900	23%	5,060
Pay phone	5,610	5,800	5,650	-1%	(150)
Cable TV	-	220	220	0%	-
Directory assistance	500	1,200	2,040	11%	840
Satellite communications	-	370	700	14%	330
Total	66,690	122,830	257,310	16%	134,480

Source : Korea Telecom, "KT's Business Strategy toward the 21st Century," 1999, 17.

The Korean IT market has been growing continuously in spite of the IMF bailout program. Following the refurbishing of the Korean regulatory system to cope with the market opening, it is expected that the participation of private firms and foreign TOs in the domestic telecom markets will increase.

4.2 Case Analysis of Korea Telecom's (KT) Strategic Alliances

4.2.1 Present Status of Strategic Alliances

Based on Yoshino's classification mentioned in Chapter 2, KT's alliance efforts can be divided into contractual alliances and equity alliances.

In this chapter, 82 cases of alliances made by KT during the past six years from 1994 to May of 1999 were studied. Most of the necessary materials were collected from the KT departments concerned and some from other sources including newspapers. The detailed lists of the alliances can be seen in the Appendix. There was no alliance during the KT's monopoly period until 1989, and the importance of strategic alliances was not recognized even after competition had been introduced in the fields of international telephony and value added services in 1990. With the second restructuring of the telecom industry in 1994, competition was introduced in the basic services including long distance, mobile, paging, etc., and since then strategic alliances have been considered as a means to meet the rapidly changing telecommunications environments. KT actively pursued strategic alliances in 1997, though such efforts withered of no avail following the 1998 financial crisis.

[Table 4-4] Number of Strategic Alliances by Year

Year		1994	1995	1996	1997	1998	1999	
Contractual Alliances	Domestic		5	7	26	9	3	50(61%)
	Overseas	1	3	2	7	1		14(17%)
	Sub-total	1	8	9	33	10	3	64(78%)
Equity Alliances	Domestic		1		3	2		6(7%)
	Overseas	1	1	9		1		12(15%)
	Sub-total	1	2	9	3	3		18(22%)
Total	Domestic		6	7	29	11	3	56(68%)
	Overseas	2	4	11	7	2		26(32%)
	Sub-total	2(2%)	10(12%)	18(22%)	36(44%)	13(16%)	3(4%)	82(100%)

68 percent of the alliances were with domestic firms, and contractual alliances took much larger proportion (78%) than equity alliances (22%). Such disproportion can be explained as KT tried to enhance its competitive strength to survive in the open market competition. Especially, concerning equity alliance, there was only one case of overseas investment since 1997.

4.2.2 Analysis of Strategic Alliances

1) Types of Strategic Alliances

[Table 4-5] shows that 78 percent of alliances were contractual ones which explains that short-term cooperative relations were more favored. This reflects that the flexibility of business complementing with each other was regarded as more important than the governance structure with long-term capital investment.

Most alliances in the marketing and technology were contractual alliances. The alliances in marketing were to increase the market share in the competitive long distance and international telephone markets, and the technological alliances were to acquire the advanced technologies through the technology transfer and joint developments such as fiber optical cables, electronic commerce, next generation network planning, etc.

[Table 4-5] Types of Strategic Alliances

Alliance types		Partners		
		Domestic	Overseas	Total
Contractual	Sales & Marketing	22	7	29(35%)

Alliances	Technological alliances	20	6	26(32%)
	Manufacturing alliances	3		3(4%)
	Supply alliances	1		1(1%)
	Composite alliances	4	1	5(6%)
	Subtotal	50(78%)	14(22%)	64(78%)
Equity Alliances	Equity participation	4	9	13(16%)
	Joint venture		3	3(4%)
	Consortium	2		2(2%)
	Subtotal	6(33%)	12(67%)	18(22%)
Total		56(68%)	26(32%)	82(100%)

Equity alliances were more active with foreign companies than with domestic ones as you can find six domestic and twelve overseas alliances in the above table. The domestic equity alliances were made in limited areas such as KT Freetel, GMPCS, and so on, due to regulatory restriction on Korea Telecom.

The overseas equity alliances were made in an effort to overcome diverse barriers imposed on KT in the domestic market. Such alliances were concentrated mostly in developing countries, especially in the fields of telecom network expansion, wireless mobile services, and paging services in which KT has accumulated considerable experiences and know-how. But the lack of alliances with TOs in advanced countries, clearly shows insufficient diversity in the strategic alliances made by KT. Recent stalemate in the overseas business activities since the 1997 financial crisis implies that KT has not been adequately responding to the globalization of the economy. To meet the global telecom demands and secure international competitiveness, KT should

make every endeavor to forge global equity alliances.

2) Motives of Strategic Alliances

[Table 4-6] shows the motives of strategic alliances.⁸⁾

As shown in [Table 4-6], strategic alliances were formed to meet the competitive challenge more effectively(32%), and to expand market share(28%). This implies that strategic alliances were introduced to increase market share and to be more competitive in the telecommunications market.

[Table 4-6] Motives of Strategic Alliances

Partners	Domestic	Overseas	Total
Risk dispersion (Cost-sharing)	10	2	12(8%)
Countermeasure to competitors (increase market share)	32	14	46(29%)
Pursuit of economic efficiency (complementary characteristics of technologies)	13	5	18(11%)
Opportunity to enter into new market	5	14	29(18%)
Early introduction of new products and Preoccupation of markets	28	9	37(24%)
Acquisition of business licenses	4	11	15(10%)

Note) Since two or more motive are allocated to each case, the number of alliances on the above table exceeds the total.

⁸⁾ Jung-Ho Pyo, "A Study on Strategic Alliances among IT Operators," 1996, 61.

Alliances as a means to acquire business licenses and to reduce risks is rarely found in the table. In domestic alliances only four government-approved project including PCS can be regarded to be made for the acquisition of the licenses. All the foreign alliances were made to secure bridgeheads in overseas markets such as Latin America, Southeast Asia, India, and Russia.

The percentage of risk dispersion motive (cost sharing) is relatively low, because there were not many large projects, which require huge investments and R&D expenditure. Most of such alliance were with domestic firms.

The proportion of economic efficiency motives is also low (11%), and a few alliances were made in the sectors of ISDN, ATM, fiber optics, wireless radio and cable TVs. However, the number of this type of alliances is expected to increase sharply.

3) Relationship Structure of Alliances

To understand the relationship among partner firms in the alliances, I categorized the alliances into three groups: horizontal alliances in an industry, vertical alliances among industries, and multilateral alliances⁹⁾.

As shown in [Table 4-7], 44 percent of strategic alliances were made vertically among industries, and 39 percent were made horizontally within an industry, and the remaining 17 percent were made in the multilateral relations. Considering that most traditional interfirm alliances have vertical relationships, Korea Telecom's alliances were mostly made with firms in the same industry.

⁹⁾ Jung-Ho Pyo, "A Study on Strategic Alliances among IT Operators," 1996, 60.

[Table 4-7] Relationship Structure of Alliances

Motives \ Partners	Domestic	Foreign	Total
Horizontal alliances in an industry	13	19	32(39%)
Vertical alliances among industries	30	6	36(44%)
Multilateral alliances	12	2	14(17%)
Total	55(67%)	27(33%)	82(100%)

The relational structure of the domestic and overseas strategic alliances is quite different with each other. Vertical alliances are more popular among domestic firms, and horizontal alliances are more common with foreign firms. This explains that Korea Telecom favors companies which it can maintain its control in the structure of the value chain, and that it is not ready for horizontal alliances with competing companies.

This implies that Korea Telecom needs to implement strategic alliances with domestic companies more actively to cope with foreign companies making inroads into the domestic market in the near future. Strategic alliances in the same industry is more common in the international alliances, which implies that Korea Telecom is getting the technology in need from the advanced foreign companies.

Multilateral alliances are utilized widely in marketing such as telephone card sales or distribution networks.

4.2.3 Evaluation of Strategic Alliances

Based on the above analysis, strategic alliances of Korea Telecom show the

following characteristics:

1) Korea Telecom did not place much importance to strategic alliances because of its monopolistic/oligopolistic position in the telecom market. With the second reorganization of the telecom industry in 1994, it began to pursue alliances and its activities were most active in 1997, but they soon receded with the financial crisis after 1998.

2) Contractual alliances in marketing and technology were more favored than equity alliances.

3) Motives such as expansion of market share and market preoccupation to secure competitiveness show relatively high proportions.

4) Vertical alliances are more common with domestic companies, but horizontal alliances are more common with foreign firms.

[Table 4-8] shows that strategic alliances of Korea Telecom have little connection with the long term business goals to become a global integrated telecom group. Also, strategic alliances were taken as complementary measures, but in the future the company need to reconsider the importance of strategic alliance as a way to enhance its competitiveness in core business to meet the rapidly changing environment.

Alliances were made mostly in wired telecommunications areas, with forty six percent of the total. Most of the alliance partners were domestic companies rather than foreign ones. Domestic alliances occurred in most strategic business areas but overseas alliances are concentrated mainly on projects in developing countries. There

was no alliance with companies in advanced countries in strategic business areas like wireless communications, multimedia, and broadcasting.

[Table 4-8] Number of KT's Alliances by Strategic Business

Strategic Partner	Domestic		Foreign		Total		
	Business alliance	Capital alliance	Business alliance	Capital alliance	Business alliance	Capital alliance	Total
Wired	29		10		39		39(46%)
Wireless radio	7	3	4		11	3	14(16%)
Multimedia	10		2	1	12	1	13(15%)
Overseas business				12		12	12(14%)
Broadcasting		2	1		1	2	3(4%)
Business diversification	4				4		4(5%)
Total	50	5	17	13	67	18	85(100%)

Note) The number of business alliances with foreign partners exceeds the total by three, since two cases of next-generation network design and joint R&D on ATM network are classified as wired/wireless alliance.

Source : Korea Telecom, "KTVision 2005," 1996.

4.3. Recommendations for Korea Telecom

For the success of strategic alliance, the first factor to consider is the connection of alliances with the company's strategic objectives. Strategic alliance should be regarded as an alternative strategy and implemented accordingly. Next, it is necessary to review the competence and competitive advantage of the company to find out its strengths and weaknesses. Any weakness can be rectified through strategic alliances. On the basis of such analysis, companies can find good partner(s) for the alliance.

In this chapter we will examine KT's business goals and its competitive advantage and suggest direction for KT's strategic alliance in the future.

4.3.1 Strategic Objectives of Korea Telecom

1) Future Telecom Market Analysis

The Korean telecommunications market is forecast to be 25.7 billion won and a few more national competitors will appear in the year 2002. Wire telephone traffic will transfer to the wireless telephony and wireless market will keep on increasing with additional 5-6 million subscribers until 2002.

The exploding expansion of internet will lead the change of social life and the number of internet users will reach 10 million in the year 2002. Many business opportunities will be expected in the network interconnection rather than in the internet itself. The expansion will depend on the users, and Korea Telecom will have to overcome the limits with the successful entry into the wireless market.

Network construction focused on the internet will be a prerequisite for future business. Future success will also depend on marketing and network operations.

[Table 4-9] Strategy of Foreign TOs

	Status	Actions
AT&T	<ul style="list-style-type: none"> • No customer base • Provide diverse services through various networks • Move of RBOCs to long-distance markets • Possible access to local service market • Necessity of diversification 	<ul style="list-style-type: none"> • Disposal/disinvestment of non-telecom sectors • Acquisition of TCG, TCI to secure customer bases • Active integration of services • Transition of service network to Internet-based network • Pursue network + service provider • Utilize cable TV network
SBC	<ul style="list-style-type: none"> • Local service provider • Growth of local service market, decrease of revenue • Rapid growth of wireless services, Internet access services 	<ul style="list-style-type: none"> • Participate in growing markets such as wireless, Internet access, etc. • Expansion of subscriber networks through M&A and network based Internet service strategy • Enhancement of subscriber network to accommodate Internet services
BT	<ul style="list-style-type: none"> • 27 million subscribers • Major shareholder of Cellnet • Concentrate in international telecom business • Weakening of dominant carrier position in the UK market is expected 	<ul style="list-style-type: none"> • Enhance network + service business through participation in multimedia business • Enhance competitive edges on multimedia-based network service • Expand business areas to contents creation, e-commerce • International alliances, technological development, investment in networks
Bell South	<ul style="list-style-type: none"> • RBOC (24 million subscribers, 4 million wireless customers) • Impending competition in local services 	<ul style="list-style-type: none"> • Enhance its position in wired/wireless market with competitive edges in marketing (brand, service integration, costs)

		<ul style="list-style-type: none"> •Preoccupy Internet service market •Enter into international service market
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Source : Korea Telecom, “KT’s Business Strategy toward the 21st Century,” 1999, 50.

2) Emergence as a Global Carrier

The strategic goal of Korea Telecom is to become one of the leading global carriers with strategic alliances and future core competence¹⁰⁾. For this purpose, the first thing will be to acquire the IMT-2000 license, which is expected to bring a great change in the mobile market. The second will be to invest in data business progressively. Korea Telecom plans to increase investment in the super highway network infrastructure and PC on-line communications.

¹⁰⁾ Korea Telecom, “KT’s Business Strategy toward the 21st Century,” 1999, 53.

Korea Telecom endeavours to become the first leading internet company until the year 2002 through the renovation of business processes, organization, personnel administration, etc.

Third, is the turnaround of unprofitable businesses. Directory assistance services, public telephone services and satellite services will turn to profitable businesses, and marginal businesses such as CT-2 and administration communications services will be withdrawn by 2001.

Fourth, is to expand the present core business. Korea Telecom will effectively defend the present international and long distance call markets, and enhance the profitability of the local call services by raising the rates.

[Table 4-10] Performance Targets of Korea Telecom

Year	1998	1999	2000	2001	2002
Revenue (100 million won)	87,739	102,310	115,280	125,540	138,780
Current net profit (100 million won)	2,583	3,180	5,160	6,730	9,170
No. of employees	58,202	49,191	44,491	44,491	44,491
Sales per employee (100 million won)	1.5	2.1	2.6	2.8	3.1
Return on equity (%)	4.8	5.8	7.3	9.1	11.7
Debt ratio (%)	190.2	141	138	128	116

Source : Korea Telecom, "KT's Business Strategy toward the 21st Century," 1999, 55.

4.3.2 Analysis of KT's Core Competence

In this section, I analyzed KT's core competence by using the value chain model of Michael E. Porter. The result is summarized in [Table 4-11].

1) Management Competence

Due to strict regulation and direct/indirect control of the Korean government, KT could not take proper measures to meet the rapidly changing environment. The first thing to do for KT is to secure complete autonomy in the management to cope with market opening and deregulation. Recent revisions of the Telecom Business Act allow KT to participate in new business areas, but now it suffers from improper organizational structure and shortage of qualified personnel. KT has enjoyed economy of scope in the basic telecom sector thanks to its dominant position as a public telecom service provider in Korea. However, such advantage acts instead as an obstacle in participating in new business areas because of organizational inertia in management.

2) Technological Capabilities in Network Management and Operations

As the dominant network service provider in Korea, KT's nationwide network management capabilities has largely been satisfactory. Such networking capacities connecting every customer premise equipment in the nation (local access function of a global network) could act as an edge in negotiating strategic alliances with other foreign TOs.

Viewed objectively, there is a large gap between KT's network managing/operating capabilities and the global standard in spite of KT's continuing investment in R&D activities. The more serious problem is that the gap is widening

rapidly in the fields of cutting-edge core telecom technologies, although KT has some advantage in terms of construction and O&M of basic telecom networks. Thus, the acquisition or outsourcing of such advanced technologies is one of the most urgent tasks for KT.

3) Financing Capabilities

KT had enjoyed good financial health until the 1997 financial crisis which has deteriorated revenue base and profitability of telecom business in general. It is expected that demands on financial resources will increase continuously due to redemption of telephone installation deposits, accumulated deficits in public services including directory assistance, support to national IT projects, contributions to various R&D projects, and investment in new businesses such as PCS and IMT-2000.

4) Marketing Capabilities

Leading TOs in advanced countries use a variety of marketing strategies to cope with cutthroat competition. Compared with such TOs, KT lacks experience and know-how in marketing.

Investment in marketing activities falls behind that of other TOs in advanced countries. Strategic approaches to pricing such as cost-based tariff system and selective price packages are rather limited due to governmental regulation.

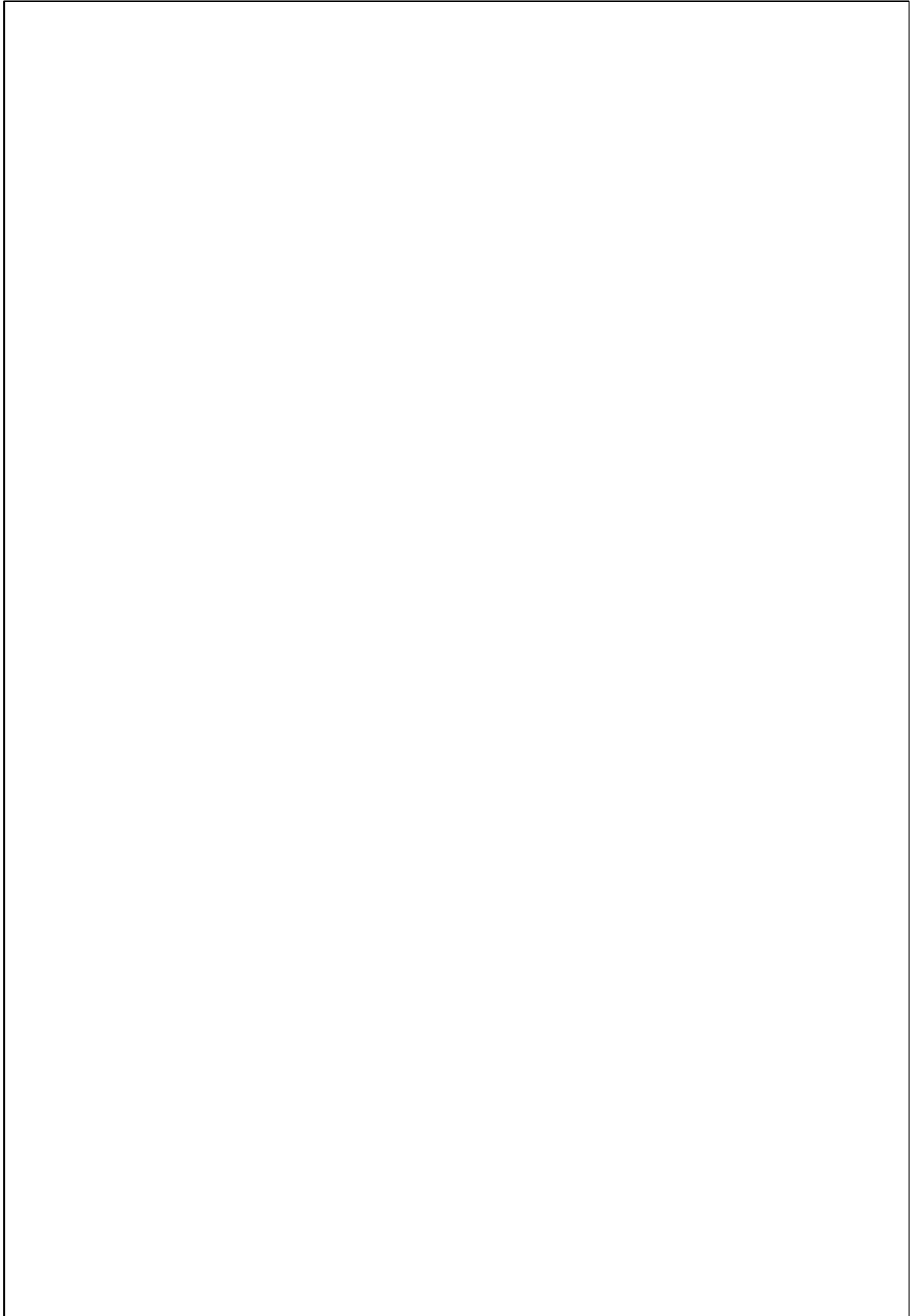
In summary, the list of KT's strengths is as follows: nationwide telecom network, skilled manpower, diverse telecom services, and robust financial structure. On the other hands, the list of weaknesses includes: government's interference on management, insufficient experience and capabilities in marketing, lack of authorities to setting service rates, lack of advanced technologies, and business structure heavily biased to basic services.

The analysis indicates that, compared with major TOs in the global market, KT makes good scores in terms of quantitative appearance, though it shows weaknesses in terms of productivity and technology base.

To secure competitive advantage over other TOs, KT has to renovate its internal business processes such as provision of new services, integrated marketing activities, enhancement and upgrading of network facilities, rationalization of human resource management, improvement of R&D productivity, and so forth. Also, it needs to readjust the value-creation activities within the organization and tries to connect its internal activities with external value chains in an appropriate way.

To do this, KT has to more actively engage in strategic alliances with other

companies and encourage merger and acquisition of other businesses which can be of help in enhancing KT's competitiveness.



[Table 4-11] Comparative Analysis of KT's International Competitiveness

Indicators	Detailed indicators	Scale				
		Very high	High	Middle	Low	Very low
Support activities						
Human resource management						
Input of human resources	% employee decrement as of 1995 compared with 1984 (Rationalization)					
	Employees as of 1995 compared with 1991 (Rationalization)					
R&D						
R&D Investment	R&D Investment in 1995 (\$ million)					
	R&D Investment compared with revenue in 1995 (%)					
R&D Manpower	R&D manpower in 1992					
	R&D manpower compared with total employees in 1992 (%)					
Infrastructure of R&D	No. of researchers engaged in IT industry in 1995					
	% of IT researchers compared with total no. of researcher in scientific/technological fields					
Procurement						
Investment size	Investment in telecom industry in 1994 (\$ million)					
	Investment prospects in telecom industry between 1995-2000 (\$ million)					
Negotiation power	Use of negotiation power in private contracts (qualitative evaluation)					

Indicators	Detailed indicators	Scale				
		Very high	High	Middle	Low	Very low
Generic activities						
Construction of telecom networks						
Investment in telecom networks	Per-line investment in 1994 (\$)					
	Investment mcompared with revenue in 1994 (%)					
Basic telecom network facilities	Telephone penetration per 100 population in 1994					
	Expected penetration per 100 population in 2000					
	Penetration of pay phone per 1000 population in 1994					
Advanced telecom	No. of packet service subscribers in 1994					

network facilities	No. of ISDN subscribers in 1994					
Capacities of network construction	Capacities of network construction in 1995 (qualitative evaluation)					
O&M of telecom networks						
Telecom network management	Per-employee lines in 1995					
	Annual average growth rate of per-employee lines between 1991-95					
	Annual average growth rate of per-employee lines between 1984-95					
O&M of telecom networks	% repairs within standard time frame in 1994 (qualitative evaluation)					
	No. of faults per 100 lines in 1994					
O&M of existing facilities	% of Automation systems in 1995					
	% of electronic systems in 1995					
O&M of advanced systems	% of digital systems in 1994 (%)					
	% of deployment of F/O systems in 1995 (qualitative evaluation)					
Marketing and service activities						
Integrated marketing	Adoption of integrated marketing techniques (qualitative evaluation)					
Advertising costs	Advertising costs in 1993 (\$million)					
	% of operating costs compared with revenue in 1993					
Value-added services	Value-added services (qualitative evaluation)					
Tariff policies	Readjustment of tariff schedule (qualitative evaluation)					
	Strategic tariff plan					
	Local call rate in 1994(\$)					

) : competitiveness evaluated in terms of ranking, : Competitiveness evaluated in terms of average and dispersion : Competitiveness evaluated qualitatively

Source : Jae-ho Lee, "A Study on Information and Telecommunications Regulation Policy and Operator's Strategies in Major Countries," *ETRI*, 1997, 33-34.

4.3.3 Recommendations for Korea Telecom

Based on the review of the changing global telecom market environment, and the results of KT's strategic alliances described in the above sections, the following recommendations are made for KT to become a leading TO providing integrated IT services in the future global markets.

First, KT needs to make a systematic approach to strategic alliance. Most of the alliances made by KT up to now have been on basic telecom services, and only a few cases were concerned with multimedia, broadcasting, and so forth. This means that KT has not yet developed strategic alliance as a tool in achieving its strategic objectives. Most of the alliances made by KT have been concentrated in simple and supplementary businesses, and it seems that the governmental intervention has restricted KT's capabilities in forging alliances with partners. To overcome such restriction, KT has to secure managerial independence from the government.

Second, to provide advanced integrated services, KT has to actively pursue alliances with firms which have cutting-edge technologies. In the future, the telecom market will be developed around the Internet and multimedia technologies based on the concept of "Time-to-Market."

Therefore, the survival of a corporation will depend on the securing of core technologies and the creation of value-added through strategic alliances with market-leaders with specialized technologies such as contents creation or application/end-user equipment development, as shown in the case of Cisco System's New World strategy.¹¹⁾ Along with this, KT has to seek diversification of alliances including joint R&D efforts.

Third, KT has to find a way to disperse the risks and huge investments associated with the modernization and enhancement of its telecom networks through alliances.

¹¹⁾ ETRI, "Weekly Technological Trend," Vol. 893, 1999, 36-45.

To provide integrated IT services such as e-commerce, wireless/broadband data services and digital broadcasting services, the enhancement of existing telecom networks is inevitable. Network is not just an entry to the market any more. It has become a market itself and network administrators have to add values to the information flowing through the networks¹²⁾. Huge capital investments will be required to build such network infrastructure, which will make the network construction projects inherently risky. In this regard, KT has to forge alliances to avoid risks inherent in building such networks.

Fourth, KT has to actively pursue participation in global alliances made in the rapidly-changing global telecom market. As mentioned by Professor J. Dunning of Redding University in the UK, super carriers are using strategic alliances and M&A as a tool for reducing costs and maximizing operational efficiencies through economy of scale. It is expected that the global telecom market will be reorganized by a few alliance groups as can be seen in the capital alliance of AT&T, BT and Japan Telecom and the struggle for IDC by C&W and NTT. As it is certain that WorldPartner joined by KT will be disintegrated sooner or later, KT has to prepare to act as a telecom hub in this region. In addition, KT has to diversify its geographic markets by promoting overseas projects especially in developing countries. In this way, KT can overcome the instabilities and risks in the business environment and secure another revenue generation base.

Lastly, KT has to actively utilize strategic alliances for entering into new markets or business diversification. For core profit-generation businesses such as wireless mobile services or the growth businesses such as broadcasting services, KT has to make alliances with domestic companies to secure diverse revenue-generation base

¹²⁾ William T. Esrey, CEO of Sprint, "Information Week," May 12, 1999.

and cope with the entry of foreign TOs into the domestic market. Strategic alliances can also be used in business diversification through strengthening of marketing capabilities, establishment of cutting-edge IT systems, and transfer to advanced cost structure.

Chapter 5 CONCLUSIONS

With the rapid changes in the IT industry, market-leading TOs with superior technological competence, financial capabilities and service development capabilities such as AT&T, BT, DT, TI and NTT are accelerating their moves for capital alliances and M&A to take advantageous position in the global telecom market.

The domestic telecom industry has endeavored to establish full-scale competition structure in a short time span under the principle of ‘domestic competition first, international competition second’. But now with the complete opening of the domestic market, domestic TOs have to pursue strategic alliances with domestic firms to defend domestic IT market, as well as foreign TOs to secure competitive edges and create revenue-generation base in overseas markets.

In this study, I reviewed the cases of KT’s strategic alliances and categorized them by configuration, motive, and relational structure to find out the efficiency and effectiveness of the alliances.

Based on the analysis of the global IT markets, the transformation of the regulatory environment, cases of KT’s strategic alliances, and KT’s strategic objectives and competence, I summarize the desirable way of strategic alliances for KT as follows:

First, KT has to establish a management system to approach strategic alliances in a systematic way.

- Lack of connection between alliances and KT's strategic objectives
- Removal of legal and regulatory limitation Secure managerial independence from the government

Second, KT has to more actively push forward with strategic alliances to secure up-to-date technological capabilities to develop integrated services.

- Future IT demand will be emerging around the Internet and multimedia technologies
- The survival of an IT company will depend on technological competence in specialized fields such as content creation, service provision, development of application and end-user equipment, etc.

Third, KT has to disperse the risks and huge investments associated with network modernization/enhancement through strategic alliances.

- Network modernization/enhancement is inevitable for the provision of integrated services high risks and heavy investments
- Dispersion of risks and reduction of the heavy investment burden
adopt network alliances

Fourth, KT has to aggressively engage in capital alliances to cope with global hegemonism and secure competitive advantages in the long-term.

- Capital alliances Super TO: reduction of costs and expenses, maximization of service efficiencies
- Emerging as a regional telecom carrier in Asia Regional telecom hub
- Advancing in overseas markets focused in developing countries :

geographic diversification, enhancement of negotiation powers

Fifth, KT has to actively utilize strategic alliances in entering new markets and for business diversification.

- Core revenue-generation business, growth business forge alliances with domestic firms to secure diverse revenue-generation base and to cope with the advancement of foreign TOs in the domestic market
- Establishment of advanced IT systems, promotion of marketing capabilities, transformation to advanced cost-based system

[Figure 5-1] shows the summary of the above recommendation.

[Figure 5-1] Desirable Direction of Strategic Alliances for KT

APPENDIX

Strategic Alliances of Korea Telecom

1. Contractual Alliances

○ Domestic : 50 Cases('95 ~ '99)

Contents	Partners	Types	Rela
Card alliance for the provision of masterphone (95.7)	5 companies (Samsung, BC,)	Sales & Marketing	Diversi
Alliance for KTCARD business(joint marketing with tour and financial co.)(95.7~98.6)	12Companies (Korean Airline.)	“	“
Public telephone service with credit cards (95.12)	5 Companies (Samsung, Kookmin, ..)	“	“
Manufacturing & marketing of co-brand cards with allied companies using the distribution channel of Jinro(96.12)	Jinro High Living	“	“
KT cards marketing with domestic agents (96~97)	4 companies including Namu travel	“	“
Complex and multifunction multicom cards alliance (97.11)	4 companies including Kukmin cards	“	“
Domestic sales of world phone cards on consignment (97)	13 companies including Korea National Tourism Organization	“	“
Cooperation on the purchase and installation of KT ISDN termination equipment (98.6)	8 companies	Parts supply	Vertical allia
Exhibition & sales of KT products on consignment (97)	Consigned agents	Sales & marketing	“
Joint business on integrated logistics information system (97.6)	KL-NET	Complex alliance	Horizonta allia
Business cooperation on integrated logistics information system (97.6)	2 transportaion companies	Sales & marketing	Diversifie allia

Contents	Partners	Types	
Cooperation to develop EDI S/W and secure service users (95)	11 S/W companies	Complex alliance	Vert
Cooperation to enhance the efficiency of SI business (97)	34 companies	Sales & Marketing	
Collecting agency of the telephone bill (97.11)	2 distribution co.s	“	D
Cooperation on the telephone information service (97.10)	5 mobile telephone companies	“	Vert
Joint construction of the telecommunication ducts (97.5)	G&G Telecom	Product alliance	H
Joint installation and use of CT-2 station (96.11)	10 CT-2 companies	“	
Joint provision of CT-2+ & cooperation (97.5)	SKT Happy telecom	Sales & Marketing	
Cooperation to develop Kernet-Nawoonuri package service (98.5)	NawooCom	“	
Agreement on the joint use of Kernet network (98.5)	Hansol teleocm	“	Vert
Joint advertisements of CT-2 (96.11)	015 service co.s' association	“	H
Joint use of the partner' s advertisement medium (97.7)	SBS,SDS	"	D
Joint contribution on CT-2 development 97.11)	CT-2 companies	Technological alliance	H
Joint development of IMT-2000 technology (97.1)	ETRI	“	Vert
Joint development of vertual banking system (96.8)	25 banks	“	D

Contents	Partners	Types	Relation
Joint development of optical distribution equipment (97)	4 companies	Technological alliance	Vertical industry
Cooperation on the development of I-vision VOD applied services (95.4)	20 companies	“	“
Transfer of TIMS technology (97.7)	2 companies	“	“
Transfer of the voice recognition software (96.12)	5 companies	“	“
Transfer of TOMS technology (97.7)	6 companies	“	“
Joint development of voice dialing technology (97.10)	Related companies	“	“
Joint development of optical connector related products (97.1)	3 companies	“	“
Joint development of the GIS emulator (97.1)	Related companies	“	“
Joint development of AVL technology for GIS (97.5)	“	“	“
Joint development of internet telephony technology (97.5)	“	“	“
Development of communication technology for optical fiber subscriber network (96.11)	5 companies	“	“
Development of virtual stock market system (97.11)	11 security co.'s	“	Diversified al
Transfer of ribbon optical fiber cable technology (97.6)	2 companies	“	Vertical industry
Technology transfer of the optical fiber distribution box and termination box (97.9)	Related companies	“	“
Technology transfer on central management system of public telephones (97.10)	3 companies	“	“

Contents	Partners	Types	Relat
FLOMS technology transfer (97.6)	4 companies	Technology transfer	Vertical indus
Joint cooperation agreement (98.10)	Hanjin	Complex alliance	Verti
Business cooperation agreement (98.11)	Korea logistics information communication Co.	Technology alliance	“
Cooperation on the integrated logistics information system (98.11)	12 companies including 3I Co.	Complex alliance	“
Joint cooperation agreement (98.11)	LG Mart	Marketing	Horizo
Joint cooperation agreement (98.11)	Hyundai construction co.	Marketing	“
Consignment contract on marketing (98.11)	Lotte Data Communication	“	Verti
Consignment Contract on Supply management of line Terminal(99.3)	2 Companies	“	“
Consignment contract on marketing (99.2)	SDS	“	“
Contract on the use of Value Added services (99.5)	Hanaro		Horizo

○ Overseas : 14 Cases('94 ~ '97)

Contents	Partners	Types	Rel
Overseas sales on consignment of world phone cards (97)(Hongkong, UK, France, Guam, Saipan, Poland, Indonesia)	6 foreign companies	Sales & Marketing	Diversiffi
Overseas sales of Ktcards on consignments (97)(Australia, Poland)	2 foreign companies	“	
Cooperation on new internet business such as electronic commerce	3 foreign co.'s including Lucent Technology	Technology alliance	Vertical alli
Bellcore Horizons Program(97.5)	Bellcore	“	Horizont alli
NCS Technology Transfer (97.11)	Novel/Lotus	“	Vertical alli
Joint development & experiment of ATM (96.6)	BT,NTT	“	Horizont alli
Agreement on ATM interface experiment (95.8)	KDD	“	
Development of special fiber optical technology (97.9)	AP-CRC (Australia)	“	Vertical alli
Agreement on business (98.11)	JAST(Japan)	Complex alliance	Horizont alli

Name of Alliances	Contents	Partners
World Partners	Provision of worldsource global services to the multinational companies. (95.11)	Investors : AT&T(40%), KDD(24%), Unisource(20%), ST(16%) Non-investment members : 8 Asian co.'s, 2 European Co.'s, 1 North American Co.
FNA(Financial Network Association)	Provision of the global telecommunication services to the major financial companies (94.7)	Asia-Pacific : 6 including KT North America : 2 including MCI Europe : 8 including FT
Pacific Skylink Service	Construction of the int'l TV transmission network in Asia-Pacific region leasing transponders of Intelsat (95,1)	3 TV broadcasting program transmission companies of US, Japan, Hongkong
Skyways Alliance	Construction of the worldwide aviation network using Inmarsat communication satellites (96.3)	4 earth station operating companies and 4 other companies
Infonet Service Corp.	Domestic marketing of Infonet services using co-brand (97.10)	Investors : 6 companies including Telefonica ,KDD, Telia, Telstra, KPN, Swiss PTT

2. Equity Alliances

○ Domestic : 6 Cases('97 ~ '98)

Contents	Partners	Types	
Enter the wireless data business (97)	Intech Telecom	Participate in the capital investment	Horizontal
Secure the technology and experience on CATV (97)	CATV companies	“	
Provision of the multi-video new services (98)	Subsidiary of Intelsat	“	Vertical
K-TV satellite business (98)	Domestic and foreign broadcasting companies	Consortium	
Establishment of KT Freetel (97)		“	
Provision of GMPCS (95)	ICO Korea	Participate in the capital investment (60%)	Joint

○ Overseas : 12 Cases('94 ~ '98)

Countries	Details	Partners	Types
Mexico	Local/ long distance and int'l call, wireless communication services (96.12)	Miditel	JVC
Vietnam	Telephone network expansion (96.4)	VNPT	BOT
Philippines	Basic telecommunication business (94)	Retelcom	JVC
Mogolia	Participate in the privatization of MT (96.2)	Mongolia Telecom	Capital Investm
Japan	Satellite broadcasting business (96.9)	KSB	“
Cambodia	TRS service (96.7)	MTM	“
Poland	Paging Services (96.4)	Telepage	“
China	GSM cellular service (96.4)	Ahhui Shenhan	“
Taiwan	City phone service (96.3)	PTT	“
Japan	One number service (96.1)	ONS	“
India	Paging services(95.9)	MKTLr	JVC
Russia	Local telephone service in Vladivostok and GSM service in the area (98.12)	NTC	Capital Investm

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